Cactoblastis cactorum - Sterile Insect Technique Validation Study Results

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The most successful program of classical biological control of weeds has been the control of invasive prickly-pear cactus (*Opuntia* spp.) by the Argentine cactus moth *Cactoblastis cactorum*. However, the moth has now become an invasive pest in the southeastern USA and its ability to dramatically control its host plant raises concerns for the safety and survival of the many ecologically, agriculturally, and culturally important *Opuntia* spp. in southwestern USA and Mexico. The sterile insect technique (SIT) has been developed for this insect as an area-wide control measure. A validation/implementation study of the SIT coupled with sanitation efforts (removal of eggsticks, infested pads/larvae, and pupae) has limited the western spread of the moth. Sterile insects released in the field were highly competitive against wild moths. Competitiveness was evaluated for males by their recapture rate in pheromone-based monitoring traps and the proportion of sterile eggsticks produced as a result of sterile males mating with wild females. Continued refinement of the SIT against *C. cactorum* represents an opportunity to manage this biological control agent become pest. If implemented rapidly on new introductions, SIT can also serve as an effective risk management tool to eradicate other new invasive pests.